



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/805,002	03/19/2004	Masashi Yokomori	42478-3817	7786

21611 7590 04/21/2005

SNELL & WILMER LLP
1920 MAIN STREET
SUITE 1200
IRVINE, CA 92614-7230

EXAMINER

SHECHTMAN, SEAN P

ART UNIT

PAPER NUMBER

2125

DATE MAILED: 04/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/805,002	Applicant(s) YOKOMORI ET AL.	
	Examiner Sean P. Shechtman	Art Unit 2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 10-14 and 18-22 is/are pending in the application.
- 4a) Of the above claim(s) 18-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 10-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 10/164,208.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

47

Application/Control Number: 10/805,002	Page 2
Art Unit: 2125	

DETAILED ACTION

1. Claims 1-6, 10-14, and 18-22 are presented for examination. Claims 1-3, 6, 10-11, and 14 have been amended. Claims 18-22 are new.

Election/Restrictions

2. Newly submitted claims 18-22 directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Claims 18-22 are directed to comparing different NC data in terms of defects classified in 700/108. Original claims 1-6 and 10-14 compare different NC data in term of production parameters. Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 18-22 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Priority

3. This application filed under former 37 CFR 1.62 lacks the necessary reference to the prior application. A statement of the current status of the parent nonprovisional application(s) should be entered following the title of the invention or as the first sentence of the specification.

Drawings

4. Objection withdrawn due to the amendment.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Application/Control Number: 10/805,002	Page 3
Art Unit: 2125	

5. Claim 1 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for NC data management of different versions and a difference function to fetch two pieces of data and output the difference between the two pieces of data (page 22 and page 26 of the instant specification), does not reasonably provide enablement for outputting the difference between stored NC data that had been most recently stored prior to the generated NC data and the generated NC data. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make or use the invention commensurate in scope with these claims.

Examiner respectfully submits that the specification fails to reasonably provide scope of enablement for the terms "most recently" acquired NC data. For example, in what time frame was most recently acquired NC data acquired and when would acquired NC data be considered not the most recent?

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-6 and 10-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claim 1 recites the limitation "the generated NC data from the production schedule" in lines 14-15. Claims 2 and 10 recite the limitation "the acquired production schedule of NC data" in lines 13-15. Claims 3 and 11 recite the limitation "the acquired production schedule of NC data" in lines 6-7. There is insufficient antecedent basis for these limitations in the claims.

Claim Rejections - 35 USC § 102

Application/Control Number: 10/805,002	Page 4
Art Unit: 2125	

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-3, 5, 10, 11, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Pat. No. 5,757,648 to Nakamura.

Referring to claims 1, 2, 5, 10, and 13, Nakamura teaches

a production schedule acquiring step for acquiring a production schedule, for operating pieces of production equipment to provide an output of production items from the production line, from a scheduling apparatus (See Fig. 5 and Fig. 4, elements 22, 26, 28 and Fig. 7, element 22; Col. 3, lines 59-60; Col. 4, lines 57-64);

an NC data acquiring step for acquiring NC data used for operating each piece of the production equipment from the acquired production schedule including production parameters for each piece of production equipment (Col. 7, lines 18-24; Col. 8, line 66 – Col. 9, line 6); and

a difference obtaining step for obtaining, in terms of each production parameter for each piece of the production equipment, differences between the acquired production schedule of NC data and stored NC data of the same type of items (Fig. 9; Col. 7, line 33-64; Col. 14, lines 27-40; Col. 13, lines 51-62).

Nakamura clearly teaches a machining program converting system that converts original machining programs of equipments into compatible machining programs for substitutive machining equipment “when said machining program converting system determines that the original machining program is not compatible for said substitutive machining equipment” (Col. 14, lines 27-40). The examiner respectfully submits that a machining program converting

Application/Control Number: 10/805,002	Page 5
Art Unit: 2125	

system that converts original machining programs of equipments into compatible machining programs for substitutive machining equipment “when said machining program converting system determines that the original machining program is not compatible for said substitutive machining equipment” is a production system that can set forth the differences between stored NC data (the program of the machine needing to be substituted) and generated NC data (the program of the substitutive machine) for the same type of items. Both the program of the machine needing to be substituted and the program of the substitutive machine are generated and stored.

Nakamura clearly teaches the display necessary to meet the claim limitations in column 7, lines 24-29. Nakamura clearly teaches the Ethernet which is a local area network (See cover figure).

The recitation of a plurality of pieces of equipment has been given patentable weight. The recitation of each piece of production equipment having a parts supply unit has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Referring to claims 3 and 11, Nakamura teaches the NC data management above, wherein the production schedule is generated for each version of each production item, each production schedule showing a version of a production item (See Fig. 5), the NC data acquiring means acquires NC data of a version of a production item to be made (Col. 4, lines 57-64), and

Application/Control Number: 10/805,002	Page 6
Art Unit: 2125	

the difference obtaining means obtains differences between the production schedule of NC data and stored NC data, in terms of each production parameter of a version of the same type of items of the stored NC data (Fig. 9; Col. 7, line 33-64; Col. 14, lines 27-40; Col. 13, lines 51-62).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 4, 6, 12, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 5,757,648 to Nakamura in view of U.S. Pat. No. 5,822,210 to Kobayashi (IDS 3/19/04).

Referring to claims 4 and 12, Nakamura teaches that each production parameter includes a production equipment ID (Fig. 5, machine equipment), an effective date (Col. 1, lines 14-19).

Referring to claims 4 and 12, Nakamura teaches all the limitations set forth above, however fails to teach that the production line is used to mount parts onto a circuit board, and each production parameter includes a production line ID, a parts number ID, and an update date.

Referring to claims 6 and 14, Nakamura teaches all the limitations set forth above, however fails to teach that the NC data contains an NC program showing a parts mounting position, a parts arrangement program, a board program, and a parts library showing conditions for mounting parts.

Application/Control Number: 10/805,002	Page 7
Art Unit: 2125	

However, Kobayashi teaches analogous art, wherein Kobayashi teaches a manufacturing management system and method (Title; Abstract line 1 of '210) for controlling a production line, said line having a series of a plurality of pieces of production equipment (See Fig. 2 of '210) each of which has a parts supply unit (See Fig. 2, elements 2, 3, 11, 32; Col. 38, lines 29-31; Col. 1, lines 31-68; Col. 5, lines 1-17; Col. 6, lines 38-57; Col. 9, lines 50-67; Col. 10, lines 13-49; Col. 11; Col. 13, lines 1-20 of '210), wherein

referring to claims 4 and 12, Kobayashi teaches the NC data management above, wherein the production line is used to mount parts onto a circuit board, and each production parameter includes a production line ID, a production equipment ID, an effective date, a parts number ID, and an update date (Figs. 16; Col. 12, lines 21-41); and

referring to claims 6 and 14, Kobayashi teaches the NC data management above, wherein the NC data contains an NC program showing a parts mounting position, a parts arrangement program, a board program, and a parts library showing conditions for mounting parts (Fig. 20; Col. 8, lines 24-28, and Col. 18, lines 63-68).

Therefore, it would have been obvious to one of ordinary skill in the art at the time that the invention was made to combine the teachings of Kobayashi with the teachings of Nakamura.

One of ordinary skill in the art would have been motivated to combine these references because Kobayashi teaches a manufacturing management system having set-up support for performing set up in a highly efficient manner (Col. 1, lines 7-9 of '210). Further advantages of Kobayashi are directed toward using parts wheels for accurately and efficiently mounting parts (Col. 35, lines 21-30 of '210). Furthermore, Kobayashi teaches efficient arrangement of parts reels (Col. 36, lines 4-13 of '210). Further still, Kobayashi teaches efficient allocation of parts reels to machines (Col. 36, lines 26-39 of '210).

Application/Control Number: 10/805,002	Page 8
Art Unit: 2125	

Response to Arguments

9. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., providing a comparison of two sets of NC data to optimize the preliminary setting for a subsequent production run; generating difference NC data in an automatic fashion to enable an editing and selection of optimum NC data when compared with quality control NC data from recent past production runs to provide for a new production run of a specified electronic item; the retrieval of information in a comparative difference mode) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

10. All other arguments with respect to claims 1-6 and 10-14 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

Application/Control Number: 10/805,002	Page 9
Art Unit: 2125	

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean P. Shechtman whose telephone number is (571) 272-3754. The examiner can normally be reached on 9:30am-6:00pm, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P. Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SPS

Sean P. Shechtman

April 13, 2005



LEO PICARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100